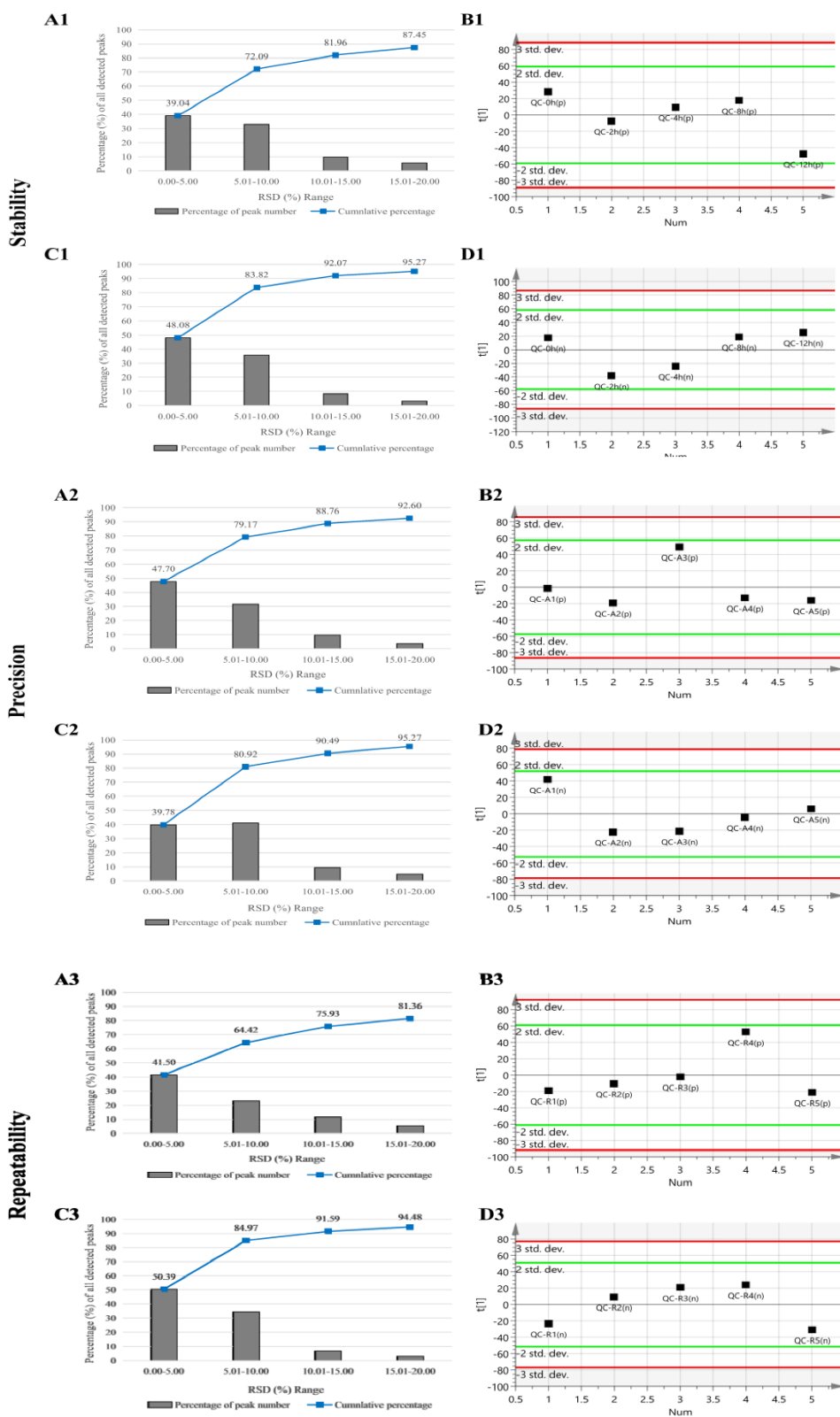
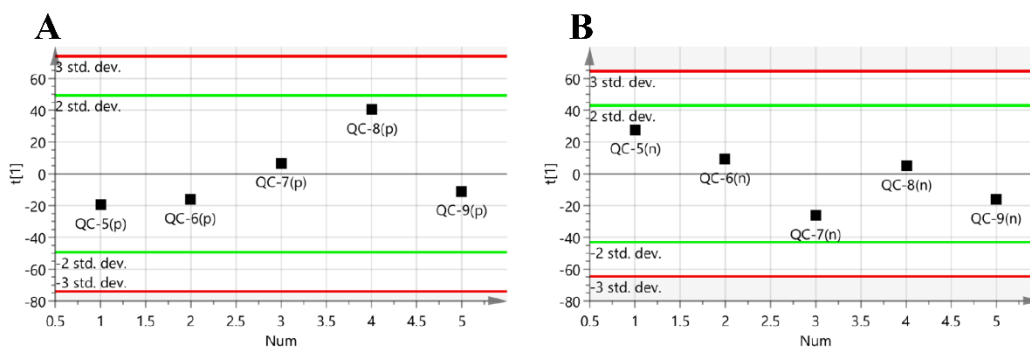


## Supplementary material

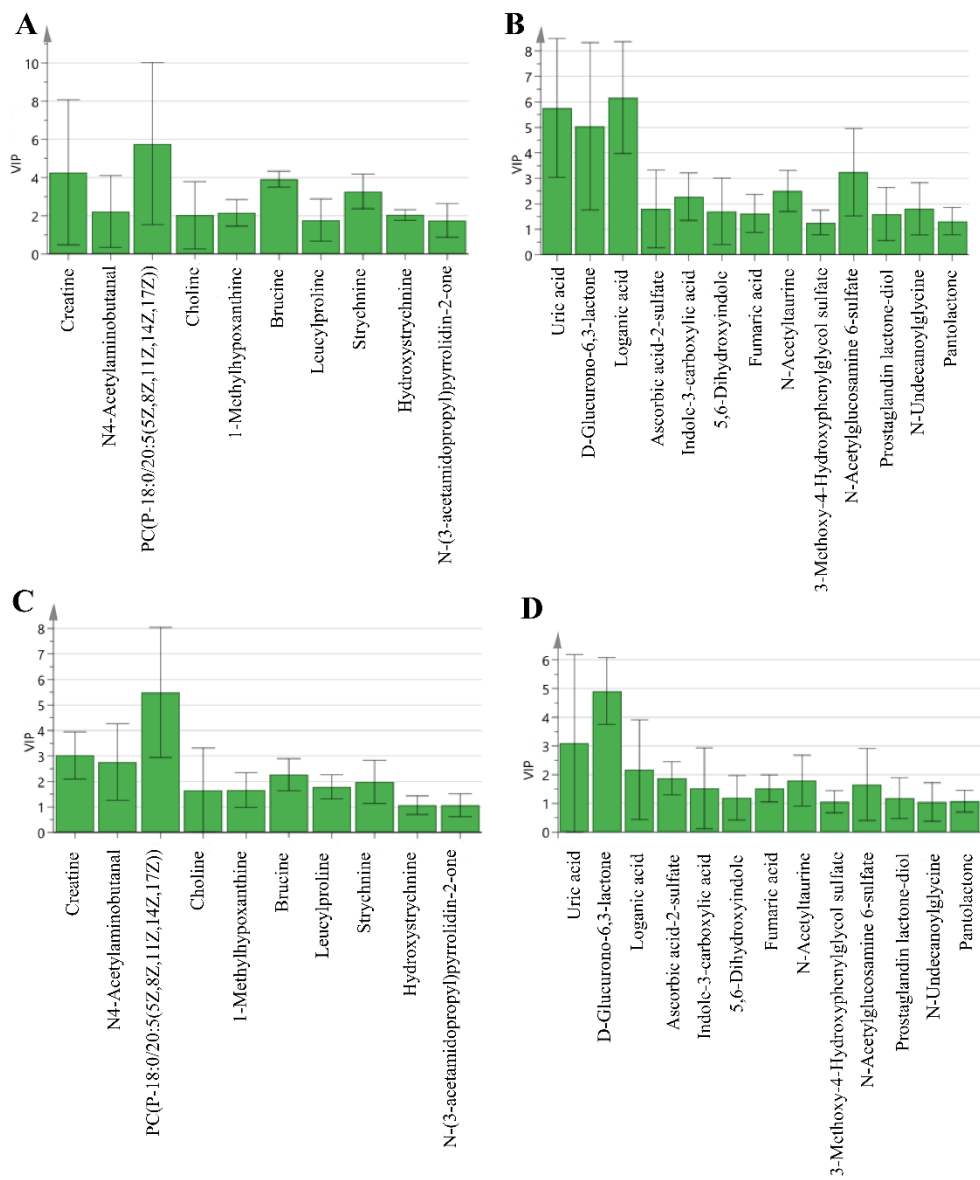


**Fig. S1.** Evaluation of analytical characteristics, including stability, precision and repeatability. (A1-3) and (C1-3) show the distribution of %RSD for metabolites' areas in QC samples in positive and

negative mode, respectively. (B1-3) and (D1-3) are score plots of PCA for QC samples in positive and negative mode, respectively. The percentage of compound numbers within corresponding %RSD range is represented by each column. The line reveals the accumulative percentage of responses.



**Fig. S2.** PCA score plots of QC samples in positive (A) and negative (B) mode.



**Fig. S3.** (A, C) and (B, D) are the Column plots of VIP value with jack-knifed confidence intervals in positive and negative mode, respectively.

**p value in Table 1, 2 and 3.**

**Table 1.** SG vs. CG p=0.001 (ALT); SG vs. CG p=0.025 (TP); SG vs. CG p=0.003 (ALB); SG vs. CG p=0.000, SGG vs. SG p=0.04 (CREA); SGG vs. SG p=0.012 (TG); SG vs. CG p=0.001 (GLU).

**Table 2.** SG vs. CG, the p values from number 1 to 19 are 0.002, 0.000, 0.018, 0.037, 0.001, 0.001, 0.002, 0.000, 0.015, 0.000, 0.003, 0.001, 0.011, 0.009, 0.002, 0.000, 0.000, 0.000, 0.031, respectively.

SGG vs. SG, the p values from number 1 to 19 are 0.000, 0.000, 0.015, 0.013, 0.000, 0.006, 0.000, 0.018, 0.000, 0.000, 0.001, 0.009, 0.014, 0.000, 0.007, 0.000, 0.001, 0.000, 0.004, respectively.

**Table 3.** SG vs. CG, the p values from number 1 to 4 are 0.000, 0.000, 0.000, 0.000, respectively.

SGG vs. SG, the p values from number 1 to 4 are 0.007, 0.000, 0.000, 0.000, respectively.

**The raw data of biochemical indexes. [biochemical indexes.xlsx](#)**

**The HPLC-MS raw data files (.d). [HPLC-MS raw data files](#)**